in the affirmative, albeit practical experiments hereon have not appeared. To be sure, in some modern producer systems, sight holes are provided through which the temperature in the interior can be checked ; however, it has not been known whether they have been used for the object named, and have rendered good service.

In the reaction zone, air-gas or steam-air-gas are produced in the neighbourhood of the reaction temperature, and this gas will, in the event of its being properly produced—that is to say, consisting only of CO, H and N—only come across an. inert material in the superposed incandescent bed of fuel, which neither attacks it nor admits of itself being attacked. If this incandescent bed is at the same temperature as the reaction zone, so in its passage the hot gas will be able to undergo no change of temperature. As soon as, however, a fault occurs in the generation of the gas, whereby COs is formed, so will this be reduced to CO by the incandescent bed whereby it of course must correspondingly undergo cooling. Should, nevertheless, the steam content of air supply be properly regulated, so by' the formation of C02 in the reaction zone the reaction temperature is raised, and also the gases are passed hotter into the incandescent filter than under normal conditions, and the two values, the chilling of the bed of coal and the higher temperature of the entering gases, must equalise themselves. Under the circumstances described, a formation of COa iB, however, always possible in the hollow spaces between the individual pieces of coal in the neighbourhood of the air inlet.

The production of such an incandescent bed is evidently possible (since there stands no hindrance in the way in the producer) by means of the incandescent coke, which is eventually produced from the fuel employed itself, being replenished up to a known height, and it must then also be maintained at this height by a proper carrying out of the production of steam-air gas. If, however, later too much steam is employed, so that the reaction temperature sinks and formation of OOa commences, then naturally with the regeneration of the C02 (to CO) the stock of heat in the incandescent bed will be continually diminished, and this will finally be rendered